

AMENDMENT AND RESPONSE TO OFFICE ACTION

Amendment

In the Claims

1. (Previously presented) A method for enhancing transport of a compound across a cell membrane comprising a lipid bilayer, comprising forming a complex comprising the compound and an effective amount of diketopiperazine (DKP) to enhance transport of the compound directly into the cell, wherein transport of the compound is increased in the presence of the DKP compared to in the absence of the DKP,

and contacting the cell *in vivo* with the complex.

2. (Canceled) .

3. (Previously presented) The method of claim 1, wherein the DKP is coated with a synthetic or natural polymer.

4. (Previously presented) The method of claim 38, wherein the immune response is increased by less than 20% in the presence of DKP compared to in its absence.

5. (Original) The method of claim 1, wherein the compound is a biologically active agent.

6. (Original) The method of claim 5, wherein the biologically active agent is selected from the group consisting of insulin, an insulin precursor, Parathyroid hormone (PTH), Calcitonin, Human Growth Hormone (HGH), Glucagon-like peptides (GLP), cytokines, chemokines, and fragments thereof.

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7. (Original) The method of claim 5, wherein the biologically active agent is an antibody or fragment thereof.

8. (Original) The method of claim 1, wherein the diameter of the complex is less than 5 microns.

9. (Original) The method of claim 1, wherein the diameter of the complex is less than 2.5 microns.

10. (Original) The method of claim 1, wherein the diameter of the complex is between 1.5 and 2.5 microns.

11. (Original) The method of claim 3, wherein the immune response is measured by detecting an antibody, T cell proliferation, or production of a cytokine.

12. (Original) The method of claim 11, wherein the cytokine is interleukin-2.

13. (Original) The method of claim 1, wherein DKP does not engage a toll-like receptor.

14. (Previously presented) The method of claim 1, wherein the cell is in a pulmonary tissue.

15. (Original) The method of claim 14, wherein the pulmonary tissue comprises a small airway of the lung.

16. (Original) The method of claim 14, wherein the tissue comprises alveoli.

17. (Original) The method of claim 14, wherein a dose of the compound is between 0.5 and 100 milligrams per administration.

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18. (Previously presented) The method of claim 14, wherein a dose of the compound is between 500 and 1000 micrograms per administration.

19. (Original) The method of claim 14, wherein a dose of the compound is between 2 and 16 milligrams per day.

20. (Original) The method of claim 14, wherein the molecular weight of the compound is less than 200 kDa.

21. (Original) The method of claim 14, wherein the molecular weight of the compound is less than 100 kDa.

22. (Previously presented) The method of claim 14, wherein the molecular weight of the compound is less than 50 kDa.

23. (Original) The method of claim 14, wherein the molecular weight of the compound is between 3 and 6 kDa.

24. (Previously presented) The method of claim 14, wherein the compound is a polypeptide.

25. (Original) The method of claim 24, wherein the amino acid sequence of the polypeptide is identical to a naturally-occurring polypeptide expressed by a member of the species of the mammal.

26. (Previously presented) The method of claim 24, wherein the polypeptide is selected from the group consisting of insulin, an insulin precursor, Parathyroid hormone (PTH),

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Calcitonin, Human Growth Hormone (HGH), Glucagon-like peptides (GLP), and fragments thereof.

27. (Original) The method of claim 24, wherein the polypeptide is an antibody or fragment thereof.

28. (Currently Amended) The method of claim 14, wherein the ~~method comprises a plurality of contacting steps~~ step is repeated.

29. (Original) The method of claim 28, wherein an interval of time between the contacting steps is less than 24 hours.

30. (Original) The method of claim 29, wherein the interval is less than 12 hours.

31. (Original) The method of claim 29, wherein the interval is less than 6 hours.

32. (Original) The method of claim 29, wherein the interval is less than 3 hours.

33. (Original) The method of claim 28, wherein following the plurality of contacting steps, immune cells in the pulmonary tissue are non-responsive to subsequent contact with the compound.

34. (Previously presented) The method of claim 1, wherein the cell is located in a mammal.

35. (Original) The method of claim 34, wherein the mammal is a human.

36. (Original) The method of claim 34, wherein the complex is administered orally.

Claim 37. (Canceled)

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38. (Previously presented) The method of claim 1, wherein the cell is contacted with the complex in a schedule resulting in substantially no increase in the cell's immune response.